



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

C45-19C
Job Sheet 185916



Part No: C45-19C

Job Qty: 1 ea

Part Name: Weldment



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/6/18

Job Tracking No:

Due Date: 11/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: C45-19C REV.5 IPP REV:A 18.01.22 NEW ISSUE DD VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	11/16/18	11/16/18	0.00	0.00	Start Up Large Fab-7		<i>EL</i>
100	Large Fab	1 pcs	11/16/18	11/16/18	0.00	10.00	Large Fab 8		<i>EL</i>
110	QC	1 pcs	11/16/18	11/16/18	0.00	0.00	QC9		<i>EL</i>
120	QC	1 pcs	11/16/18	11/16/18	0.00	0.00	QC5		<i>EL</i>
130	Powdercoat	1 pcs	11/16/18	11/16/18	0.00	0.50	Powdercoat6		<i>EL 18-11-14</i>
140	QC	1 pcs	11/16/18	11/16/18	0.00	0.00	QC3		<i>EL</i>
150	Packaging	1 pcs	11/16/18	11/16/18	0.00	0.00	Packaging3-2		<i>EL</i>
160	QC21-SA	1 Ea	11/16/18	11/16/18	0.00	0.00	QC21		<i>EL</i>

Part Op 100 - 1-MANUFACTURE AS PER DWG, TACK WELD FOR INSPECTION BY: _____ USE WELDING JIG C45.
Descriptions: 2-Weld as per DWG. ***SEE NOTE 1, ALL HOLES MUST ALIGN***

130 - START TIME: *11:05* OVEN TEMPERATURE: *500°* FINISH TIME: *12:25*

M 129 203

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
C45-18-1	Lifting Plate	2 Ea (2 ea)	90-Start up	
C45-18-5	Boss	2 Ea (2 ea)	90-Start up	<i>71516</i>
C45-18-6	Bumper Bracket	1 Ea (1 ea)	90-Start up	<i>06465</i>
MT-A513-T-1.000W0.120 A513 Seamless Alloy Steel Round Tubing 1"dia. x 0.120" Wall		10.5000 ft (10.5 ea)	90-Start up	<i>40681</i>
			Operation	<i>70826</i>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-St				
			14	0
			6	0
			5	0
			189	0



Container No: S127571



Part: C45-19C

Job No: 185916

Serial No/Batch: S127571

Revision: 5

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

nd.

Plex 11/6/18 1:11 PM Dart.lajeunesse.marie

Date: 11/14/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

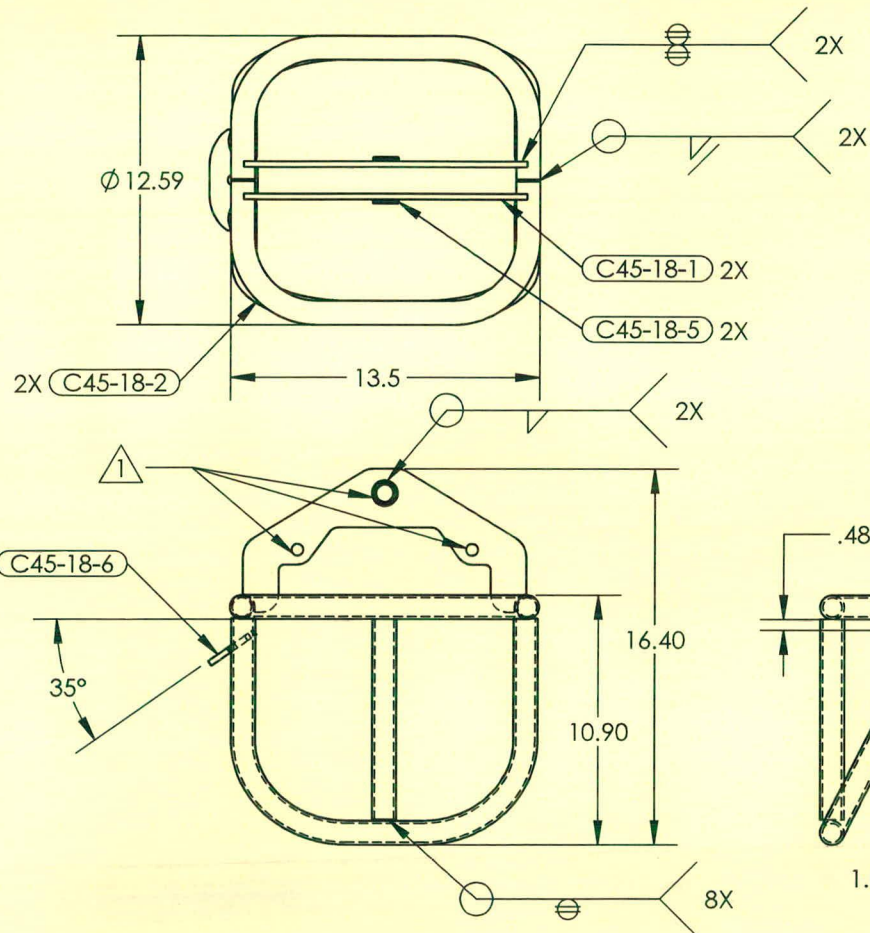
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																	
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																	
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																	
Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																
Description Work Order Deviation		Disposition		Completed By																																																																
				Lead hand / Supervisor Approval Verification																																																																
				QC / QA Coordinator Approval																																																																
Root Cause <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																			
Design ☐	Operator ☐																																																																			
Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
Handling/Pre ☐	Training ☐																																																																			
Material ☐	Use for Testing ☐																																																																			
Internal Transport ☐	Poor Information ☐																																																																			
Tribal Knowledge ☐	Rushing ☐																																																																			
LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																	
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																	
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																	
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																	
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																	
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																	
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																	
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																	
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																	
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																	
OTHER : ☐																																																																				

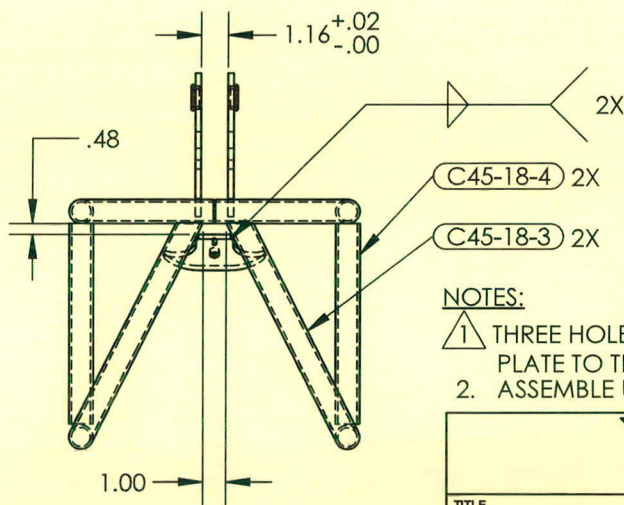
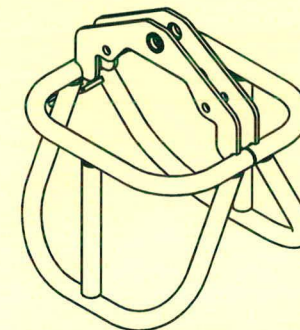
This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS				DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION				
3		AS DRAWN BY CANAM.		11/16/2012	JAG	
4	15-0087	UPDATED TO NEW DRAFTING STANDARDS. CH'D WIDTH BETWEEN LIFING PLATES WAS 1.14 IS 1.16 +.02 -.00. CH'D DIM WAS 1.29 IS .48. DELETED DIM .250. ADDED FIXTURE NOTE.		4/16/2015	RJC	JAG
5	16-0207	DELETED POWDER COAT RED FINISH SPEC, DELETED MATERIAL COLUMN FROM BOM. CH'D DWG TO SHEET METAL TOLERANCE.		11/2/2016	RJC	JAG



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 185916 MLS
1871-06



NOTES:

1. THREE HOLES MUST BE ALIGNED FROM FRONT PLATE TO THE BACK PLATE.
2. ASSEMBLE USING FIXTURE C45/C60-F.

B/O	Part #	UNIT QTY	Description
	C45-18-1	2	LIFTING PLATE
	C45-18-2	2	TOP SEMI-RING
	C45-18-3	2	SIDE LOOP
	C45-18-4	2	STIFFENER BAR
	C45-18-6	1	BUMPER BRACKET
	C45-18-5	2	BOSS

DART AEROSPACE	
TITLE WELDMENT C45 CAGE	
DWG NO. C45-19C	REV 5
MAT'L HEAT TREAT FINISH POWDER COAT RED SPEC DRAWN BY: APICAL INDUSTRIES CHECKED: DUERFELDT OPSS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125/	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 USED ON MODEL	
SCALE 1:8	DATE 7/21/2009
SHEET 1 OF 1	

